

**SIEMENS**

PATENT  
Attorney Docket No. 2003P08417WOUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Inventor:	J. Reinschke	)	Group Art Unit:	3725
		)		
Serial No.:	10/574,723	)	Examiner:	M.G. Katcoff
		)		
Filed:	April 6, 2006	)	Confirmation No.:	1912
		)		
Title	<b>METHOD AND CONTROL DEVICE FOR OPERATING A MILL TRAIN FOR METAL STRIP</b>			

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APPELLANTS' REPLY BRIEF

Sir:

Pursuant to 37 C.F.R. §41.41, this Reply Brief is responsive to the Examiner's Answer ("Answer") mailed 19 May 2011. This is not a substitute for the Appeal Brief. Any ground for rejection in the Answer that is not refuted herein is considered by Appellants to have been sufficiently argued in the Appeal Brief, such that no further comment is needed herein. Arguments herein focus on errors and new arguments presented in the Answer.

This paper is primarily directed to select remarks made under the heading "Response to Argument" beginning at page 10 of the Answer and in relation to independent claim 15.

At the outset it is first noted that the argument beginning at page 10 continues an unsupportable contention that the prior art discloses a material flow model and a strip shape model when the prior art discloses a control process for reducing differences between measured values and desired values. The Jonsson reference makes no disclosure of a material flow model or a strip shape model. The absence of disclosure of each is now addressed in the context of the argument presented in the “Response to Argument”.

#### **The Jonsson Reference Does Not Disclose A Material Flow Model**

The Answer contends that, because the Examiner is entitled to give the term “material flow model” its broadest reasonable meaning, such a model can somehow be found in the Jonsson reference. Specifically, the argument contends that the “material flow model” of claim 15 is equivalent to “a model that determines a desired flatness of the strip ...” In principle Appellants do not disagree. With the Examiner having so stated a scope of meaning for the recitation “material flow model” it is still incumbent upon the Examiner to find such subject matter in the prior art.

The cited passages from the Jonsson reference simply do not provide disclosure of “a model that determines a desired flatness of the strip ...” There may be activity which relates to achieving a desired flatness, but there is no basis to contend that the prior art accomplishes this with the use of “a model that determines a desired flatness of the strip ...” In fact, the Examiner’s argument at page 10 of the Answer only goes so far as to acknowledge that the Jonsson reference describes “that a Mill Flatness Target is determined and then inputted into a controller 8 which is used to control the output of mill 5.” None of this rises to the level of a disclosure of any kind of a model. Rather, it merely supports a method of Jonsson, more fully described at col. 2, lines 10ff, which states, in part, that the

“flatness of a given strip ... is measured and compared to a second and length-dependent flatness target and a second flatness error is determined which is used to adjust both the rolling of subsequent lengths ... and to control subsequent and downstream processes for the same given strip ...”

The same passage goes on to state at Col. 2, lines 18 - 21 that

“an error in flatness at different positions ... may be detected and subsequently used to reduce or correct such errors.”

The foregoing description of a feedback process is not at all sufficient to rise to the level of the claimed model and the Answer simply mischaracterizes the prior art by referring to the disclosure of Jonsson as being a model. The Answer states, incorrectly, that

“the basic idea is still the same, creating a model of what the ideal flatness of the strip should be ...”

Appellants ask then, what model is the Examiner referring to? It is not at all understood how there can be support for finding a “model” in the Jonsson reference when the cited passages only refer to a value, i.e., a “target flatness” or a “Mill Flatness Target” neither of which are disclosed as models. At best the prior art discloses a value for flatness. That is, the prior art at best refers to determining whether a flatness meets a specification. In this regard, at col. 4, lines 26 - 29 it is stated:

“The difference between measured flatness and the OMFT is used to regulate the mill stand 5 so as to minimise the difference detected by flatness measuring roll 2 and the OMFT when subsequently rolling lengths of strip.”

There is no “model that determines a desired flatness of the strip ...” used in this process. On the other hand, the Examiner chooses to refer to disclosure in the Jonsson reference as though there is such a model and implies that Jonsson “creates” a model. There is simply no support for this position.

#### **The Jonsson Reference Does Not Disclose A Strip Shape Model**

The answer refers to the Strip Shape Model of claim 15 as a “relationship between intrinsic flatness and visible flatness”. See page 10 of the Answer. In line with the premise of giving claim language the broadest reasonable interpretation, Appellants do not disagree.

Notwithstanding the Examiner's chosen broadest reasonable meaning of the claim language, the subject matter remains absent from the Jonsson reference. However, the Examiner contends (see page 11 of the Answer) that to meet this limitation the prior art need only

"teach using the intrinsic flatness ... and the actual flatness ... to reduce the difference between them."

This is clear error. Merely finding a difference between two values (e.g., intrinsic flatness - actual flatness) is simply a subtraction and is not use of a model. The argument further notes general features of a control system, i.e., that an error is used to adjust the mill 5 of Jonsson to reduce the error.

The argument in support of the rejection focuses on a common function (i.e., reducing error) but ignores the fact that errors can be reduced without use of a model, e.g., by repetitively finding a difference and doing an adjustment.

The Examiner's argument makes another point which warrants further comment. The argument refers to "Jonsson's strip shape model" as though there is disclosure of such but there is no such disclosure and this is a mischaracterization of the Jonsson disclosure. Further, the argument acknowledges that the disclosure of Johnsson may be based on a feedback control loop and that claim 15 does not preclude a feedback control loop. Appellants agree with this assessment but disagree with the inference: mere use of a feedback control loop cannot be equated with the exercise of a strip shape model.

The issue is not whether the scope of the claim might include a feedback control loop, but whether the prior art discloses use of a strip shape model. A feedback control system, by itself, is not a model. A feedback control loop cannot be read on the claim as written because the claim requires a strip shape model and the feedback control loop of Jonsson does not employ a strip shape model. The argument also contends that the Jonsson reference is about "creating a model of what the ideal flatness of the strip should be ..." but there is no support for this either.

### **Summary and Conclusion**

The Examiner's Answer attempts to characterize the prior art as including two features: a material flow model and a strip shape model. In order to sustain a rejection under Section 102

both of these features must be clearly evidenced in the same reference. Rather, they are both clearly absent. No citation or argument has been presented to demonstrate anticipation. Instead, the Examiner's argument simply calls processes "models" as though they are models and argues at times that processes (e.g., such as reducing the difference between two values) are the same as using models.

In conclusion, the Examiner disregards the obligation to carry a minimum burden to find anticipation in order to continue the rejection. To reject the claims the Examiner must show that each prior art phrase recited in claim 15 is clearly present in the prior art.

Other arguments in the Answer, concerning the dependent claims, are traversed but are not separately addressed herein because Appellants stand on the arguments made in the Appeal Brief.

Respectfully submitted,

Dated: 07/19/11

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